

ABSTRACT OF THE DISCLOSURE

2 Cigarettes are manufactured using modified automated cigarette making apparatus.
3 Those cigarettes possess smokable rods having paper wrapping materials having additive
4 materials applied thereto as patterns. The additive materials, which can have the forms of liquid
5 or paste formulations (e.g., aqueous formulations incorporating starch or modified starch), are
6 applied to a continuous paper web on the cigarette making apparatus. The formulation is applied
7 to the paper web using application apparatus possessing rollers, and one of those rollers has a
8 series of pockets in its roll face to receive additive formulation from a reservoir and to define the
9 pattern of the formulation on the paper. For example, additive material located in the recessed
10 pockets of a first roller is transferred in a controlled manner to the roll face of a second roller in
11 roll contact with that first roller; and the additive material on the roll face of the second roller is
12 transferred to desired locations on the surface of the paper web. The formulation also can be
13 applied to a continuous moving paper web using an application apparatus possessing four rollers.
14 For example, additive material is applied to the roll face of a transfer roller due to roll interaction
15 of that transfer roller with a pick-up roller; roll interaction of the transfer roller with an
16 application roller causes transfer of the additive material from the transfer roller to the
17 application roller; and additive material from the application roller is transferred to the paper web
18 that passes between the application roller and a back-up roller. A radiant dryer is used to dry the
19 additive material that has been applied to the paper web. The radiant dryer is located on one
20 component of a two component assembly that is used to manufacture cigarettes. A first
21 component of the two component assembly provides a source of paper web, applies additive
22 material to that web in a pattern and dries the paper web; while a second component receives the
23 paper web, supplies tobacco filler and manufactures a cigarette rod from the paper web and
24 tobacco filler. Spectrometric techniques are used to ensure proper registration of the additive
25 material on the cigarette rods so manufactured, and to ensure proper quality of those cigarettes.

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